



**National Renewable Energy Laboratory
Request for Proposal Number RCL-2-32060**

***“Advanced Heavy Hybrid Propulsion Systems for Increased Fuel Efficiency and
Decreased Emissions”***

REQUEST FOR PROPOSALS

READ THIS DOCUMENT CAREFULLY

This solicitation is being conducted under the streamlined procedures for competitive subcontracts established by the National Renewable Energy Laboratory (NREL).

NREL will award a subcontract based on the following.

- P All Statement of Work (SOW) requirements being met
- P The best combination of:
 - Technical factors (based on qualitative merit criteria)
and
 - Evaluated cost

Issue Date: **April 30, 2002** Due Date: **June 17, 2002** Time Due: **04:30 p.m.** Mountain Time

Technical Questions must be received by e-mail no later than May 17, 2002

- 1. Solicitation Type** Best Value Selection
Cost Sharing - 50% / 50%

Submit offers to and request information from the NREL RFP Contact below

2. NREL RFP Contact	Randy W. Combs
	Team Leader & Subcontract Administrator
	National Renewable Energy Laboratory
	1617 Cole Boulevard, MS 1632
	Golden, CO 80401-3393
	Email: randy_combs@nrel.gov

Electronic (PDF) copies of forms and appendices can be found at:

<http://www.nrel.gov/contracts/rfps/>

3. Project Description: *This solicitation is for Phase I of a potential dual phase program.*

The U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (OEERE), FreedomCAR and Vehicle Technologies (FCVT) Program Office, represented by the National Renewable Energy Laboratory (NREL), is seeking cost-shared research and development for advanced, next-generation heavy hybrid (truck and bus) propulsion systems and hybrid vehicle systems. Vehicle weight classes between Class 3 and Class 8 are included. It is anticipated that advanced heavy hybrid vehicles will be commercialized in multiple heavy-duty vehicle classes in the latter part of this decade, providing significant improvements in vehicle fuel efficiency, while simultaneously reducing vehicle emissions.

Teaming arrangements are encouraged, especially among truck and bus original equipment manufacturers (OEM's) and manufacturers of hybrid propulsion, and hybrid components and systems, to take advantage of the best complementary technologies available from different companies and organizations.

Phase I will be a technology development program intended to design, develop, characterize, and show feasibility of energy and fuel saving heavy vehicle hybrid propulsion technologies.

The potential Phase II (not a work effort of this statement of work) will be a technology demonstration program intended to demonstrate and validate Phase I technologies in an actual Class 3 to Class 8 heavy vehicle demonstration.

Based on performance under Phase I, and review of the submitted Phase II implementation plan, (deliverable requirement at the Phase I briefing – Task 4.4 in the Statement of Work), NREL/DOE will decide whether to initiate Phase II. If it is determined to proceed to Phase II, a formal Request for Proposal (RFP) will be issued by NREL to the subcontractor(s) on the basis of performance under Phase I subcontract(s).

For both Phase I and the potential Phase II, DOE national laboratories (including NREL) may provide in-kind technical services in support of the development at no additional cost share by the subcontractor. These contributions generally will be less than ten percent (10%) of the total subcontract amount and will be for activities for which the national laboratories are uniquely qualified. In addition, national laboratory facilities and/or equipment may be available for supporting development activities. Use of laboratory technical services, facilities, and/or equipment are subject to the prior approval of DOE through the NREL Subcontract Administrator. Offerors MUST include a copy of the national laboratory's acknowledgement letter identifying the intended national laboratory activities, equipment, and/or facility needs in their proposal to be considered eligible for consideration for such assistance.

Complete description of the project is specified in the Statement of Work (see Attachment 1 to the RFP).

4. Proposed Subcontract Award and Period of Performance

NREL anticipates one to three cost sharing subcontracts to be awarded under this Phase I procurement. The estimated range of NREL funding for each subcontract, minimum industry cost share requirement, and performance period is listed below:

Project Phase	Estimated Range of NREL Funding for each Subcontract	Minimum Industry Cost Share Percentage	Performance Period
I	\$2.4M to \$3.0M	50%	3 Years

Cost proposals requiring NREL funding that exceed the estimated range listed above may not be viewed as offering a best value and may be considered to be outside the competitive range for consideration for subcontract award.

5. Competitive Negotiated Subcontract Using Best Value Selection

This solicitation shall be conducted using Best Value Selection that results in an award that is most advantageous to NREL based on the best value combination of (a) evaluated qualitative merit, and (b) evaluated cost of the offers submitted.

Best Value Selection is based on the premise that, if all offers are of approximately equal qualitative merit, award will be made to the offeror with the lowest evaluated cost. However, NREL will consider awarding to an offeror with a higher evaluated cost if the offer demonstrates the difference in cost is commensurate with the higher qualitative merit. Conversely, NREL will consider awarding to an offeror with a lower evaluated qualitative merit if the cost differential between it and other offers warrant doing so.

6. Qualitative Merit Criteria for Best Value Selection

The Statement of Work (see NREL website below) in this Request for Proposals serves as NREL's baseline requirements that must be met by each offer.

The qualitative merit criteria establish what NREL considers the technical factors valuable in an offer. These qualitative merit criteria are performance-based and permit selection of a higher priced offer that provides higher qualitative merit.

The following qualitative merit criteria will be used by evaluators to determine the technical value of the offer in meeting the objectives of the solicitation.

Each qualitative merit criteria provided below indicates its evaluation weight in parenthesis (*) as follows:

6.1 Capabilities and Facilities (10%): Technical proposal shall address the following areas:

- ability to assemble a multi-disciplined team with research experience and qualifications in the application subject area;
- knowledge of past advanced developments in the work proposed;
- the availability of equipment, laboratory and demonstration facilities, analytic support and other necessary resources for performing the work proposed;
- project management methods.

Technical proposal shall include but not limited to discussion in the following specific areas:

- Organizational Plan – Identify all project participants. Discuss the role of each participant, including any needed participation by DOE Laboratories.
- Key Personnel and Responsibilities – Include a two-page resume of each individual and evidence that each individual has agreed to accept the responsibilities assigned if an award is made.
- Identify all specialized experience.
- Identified all related experience.
- Identify facilities and equipment available
- Identify project management structure including implementation and monitoring of R&D.
- Explain your management philosophy.

6.2 Research Concept and Plan (25%): Technical proposal shall address the following areas:

- a) the responsiveness of the application to research priorities identified in the Advanced Heavy Hybrid Propulsion System program;
- b) the clarity, completeness, and adequacy of the statement of objectives (including a review of supporting data obtained in laboratory and/or pilot scale work completed to date);
- c) the technical merit and feasibility of the proposed work (i.e., is it based on sound scientific/engineering principles and on an understanding of current state of the art in the heavy hybrid vehicle industry);
- d) the adequacy and appropriateness of the schedule (sequence of project tasks, planned levels of data acquisition, sampling and analyses, principal milestones, decision points, and time for each task) and the planned assignment of responsibilities and level of manpower to complete the research.

Technical proposal shall include but not limited to discussion in the following specific areas:

- Project concept, goals, and objectives.
- Proposed R&D program described in detail.
- Rationale for proposed R&D program and why you believe it is appropriate for DOE to pursue this effort.
- Describe challenges to be overcome by the proposed R&D.
- Provide a proposed milestone plan.
- Identify task integration and project coordination.

6.3 Industrial involvement (25%): Technical proposal shall address the following areas:

- a) participation by the truck industry, a supplier to the truck industry or an end-user industry in preparation of the application and in performing the research activities;
- b) identification of, and commitment to, a viable mechanism, plan, or path to transfer the technology to end-use application at the earliest practicable time.

Technical proposal shall include but not limited to discussion in the following specific areas:

- Describe why domestic industry is not already investigating or implementing the proposed concept.
- Describe why Federal assistance is required.

6.4 Economic, Energy, and Environmental Benefits (40%): Technical proposal shall address the following areas:

- a) general applicability, timeliness, and economic viability of the proposed technology (i.e., probability of commercial application);
- b) potential for enhancing the economic competitiveness of the domestic truck industry;
- c) potential for reducing the energy consumption of the domestic truck industry and/or suppliers and end-users;
- d) potential for reducing the environmental impacts of the domestic truck industry and/or suppliers and end-users.

Technical proposal shall include but not limited to discussion in the following specific areas:

- Describe the domestic and world technology status including emerging technologies (emphasize promising new developments).
- Provide assumptions and detailed calculations of energy savings and environmental benefits of the proposed R&D.
- Commercialization Path – Identify a proposed path that may be used by the project team to transfer the technology to the end-user at the earliest practicable time. Include current and potential partnering strategies, follow-on development phases, licensing strategies, and a discussion of potential barriers and how the barriers will be overcome.

7. Cost Evaluation for Best Value Selection

After evaluation of the qualitative merit criteria, the following cost evaluation will be used to determine the best value of the offer in meeting the objectives of the solicitation.

The combined qualitative merit value will be considered equally important to the cost.

8. Evaluation Process

NREL will evaluate offers in two general steps:

Step One—Initial Evaluation

An initial evaluation will be performed to determine if all required information has been provided for an acceptable offer. Offerors may be contacted only for clarification purposes during the initial evaluation. Offerors shall be notified if their offer is determined unacceptable and the reasons for rejection will be provided. Unacceptable offers will be excluded from further consideration.

Step Two—Discussion, Selection, Negotiation, and Award

All acceptable offers will be evaluated against the Statement of Work (see NREL website) and the qualitative merit criteria listed above. Based on this evaluation, NREL has the option, depending on the specific circumstances of the offers received, to use one of the following methods of selection:

- (a) make selection(s), conduct negotiations, and make award(s) without discussions;
- (b) conduct parallel negotiations with all offerors and make award(s);
- (c) conduct discussions with all offerors, select successful finalists, conduct parallel negotiations with successful finalists, and then make award(s);
- (d) conduct discussions with all offerors, conduct parallel negotiations with the finalists, select successful finalist(s), and then make award(s);
- (e) select successful finalists, conduct successive negotiations, and make successive selections and awards;
- (f) make no award(s).

9. Proposal preparation information

- a. The proposal must include a **title page**, including the RFP title and number, name of your organization and principal investigator (with postal/delivery address, telephone and fax numbers, and email address). The title should be succinct and capture the essence of your offer.
- b. **Formatting** instructions:
 - A page is defined as one side of an 8 ½" x 11" sheet of paper.
 - Use Arial, 12-point font.
 - Maintain at least 1-inch margins on all sides.
 - Copies may be either single- or double-sided.
- c. A **technical proposal** in an *original and five (5) copies* directed toward meeting the requirements of NREL's Statement of Work (see Attachment 1) and qualitative merit criteria (see item 6 above). *The technical proposal shall be organized by task. The total proposal shall not exceed twenty (20) pages (resumes not included in page count).*

The technical proposal is required to include a detailed project timeline or Gantt chart that clearly shows all deliverables and proposed milestones for the entire project.

The technical proposal **MUST** identify national laboratory activities, equipment, and/or facility needs in their proposal to be considered eligible for consideration for such assistance (see Section 3 entitled "Project Description" of this RFP).

The technical proposal shall be formatted to include a section that addresses the following four sections:

- Capabilities and Facilities
- Research Concept and Plan
- Industrial Involvement
- Economic, Energy, and Environmental Benefits

- d. The **cost proposal** shall consist of the following components: Completed “**Cost Proposal**” forms in an *original and five (5) copies* submitted with the offer (see Price/Cost Proposal Form at <http://www.nrel.gov/contracts/rfps/>).

The offeror shall complete a cost proposal form for each year of the three year performance and a separate cost proposal form that summarizes the total proposed cost. An individual offeror's cost proposal standard format can be used if the data included is substantially the same as the NREL form. The offeror's cost proposal and delivery terms must be valid for 90 days from the date of the offer. The cost proposal must include support documentation for all categories of the proposed cost, separated by task, separated by year of the three year performance period, and a total project summary. The cost proposal must include a minimum of 50% cost share by the subcontractor. The cost proposal should separate cost for lower-tier subcontract(s), and include support documentation for all categories of the proposed lower-tier subcontract(s) cost, also for each task as well as total project cost summary. Cost proposal preparation instructions can be found at <http://www.nrel.gov/contracts/rfps/>.

In addition to the above cost proposal requirements, the offeror shall include the following information in the cost proposal submission:

- Support documentation for proposed indirect rates to include forward pricing rate agreements or schedules of cost by “Fiscal Years” for the three (3) year performance period. If available, provide copies of current approved indirect rate agreements.
- Copy of audit report for any review (audit) of your accounts or records in connection with any other Government Prime Contract or Subcontract within the past 12 months. If a copy of the audit report is not available, please provide the name, address, phone number, and e-mail address of the reviewing office.
- Identify any contracts or subcontracts awarded for the same or similar services within the past three (3) years. Please provide the customer(s) and subcontract number(s).
- Identify the accounting system start and ending month of the established organization's fiscal year.

Failure to include this information in your proposal may cause delay in the proposal evaluation and audit processes.

- e. A completed “**Representations and Certifications**” form in an *original and five (5) copies* (see NREL website).
- f. A **cover letter** including a *summary statement* indicating acceptance or any change with reason of the proposed Statement of Work.
- g. If applicable, the cover letter shall also include a **summary of deviations/exceptions** (if any) to the subcontract schedule and the standard terms and conditions and/or the intellectual property terms and conditions in the appendices. The offeror will explain any exceptions (including deviations and conditional assumptions) taken with respect to the subcontract schedule and terms and conditions. *Any exceptions must contain sufficient amplification and justification to permit evaluation.* Such exceptions will not, of themselves, automatically cause an

offer to be termed unacceptable. A large number of exceptions or one or more significant exceptions not providing any obvious benefit to the Department of Energy or NREL may, however, result in rejection of such offer as unacceptable.

- h. The cover letter shall also include a statement that your organization is aware of the Small Business (Lower-Tier) Subcontracting Plan requirements stated in this RFP. The offeror shall submit a formal Small Business Lower-Tier Subcontracting Plan within five working days of notification from NREL of its intent to negotiate toward award of a potential subcontract.
- i. This solicitation does not allow the submittal of facsimile or electronic proposals.
- j. This solicitation does not commit NREL to pay costs incurred in the preparation and submission of a proposal in response to this RFP.

10. Solicitation Provisions—full text provided

a. Late submissions, modifications, and withdrawals of offers

Offers, or modifications to them, received from qualified organizations after the latest date specified for receipt may be considered if received prior to award, and NREL determines that there is a potential price (cost), technical, or other advantage, as compared to the other offers received. However, depending on the circumstances surrounding the late submission or modification, NREL may consider a late offer to be an indication of the offeror's performance capabilities, resulting in downgrading of the offer by NREL evaluators in the technical evaluation process. Offers may be withdrawn by written notice or telegram (including mailgram) received at any time before award. Offers may be withdrawn in person by an offeror or an authorized representative, if the representative's identity is made known and the representative signs a receipt for the offer before award.

b. Restrictions on disclosure and use of data

Offerors who include in their proposals data that they do not want disclosed to the public for any purpose or used by the government or NREL, except for evaluation purposes shall—

1. Mark the title page with the following legend:
“This offer includes data that shall not be disclosed outside the government or NREL and shall not be used or disclosed—in whole or in part—for any purpose other than to evaluate this offer. If, however, a subcontract is awarded to this offeror as a result of—or in connection with—the submission of this data, the government or NREL shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting subcontract. This restriction does not limit the government or NREL's right to use information contained in this data if obtained from another source without restriction. The data subject to this restriction are contained on pages [insert page and line numbers or other identification of pages]”; and

2. Mark each page of data it wishes to restrict with the following legend:
"Use or disclosure of data contained on this page is subject to the restriction on the title page of this proposal."

c. Notice of right to receive patent waiver (derived from DEAR 952.227-84) and technical data requirements.

Offerors (and their prospective lower-tier subcontractors) in accordance with applicable statutes and Department of Energy Acquisition Regulations, (derived from DEAR 952.227-84) have the right to request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of the subcontract that may be awarded as a result of this solicitation, in advance of or within thirty (30) days after the effective date of subcontracting. Even where such advance waiver is not requested or the request is denied, the subcontractor will have a continuing right during the subcontract to request a waiver of the rights of the United States in identified, individual inventions.

Domestic small business firms, educational institutions, and domestic nonprofit organizations normally will receive the Patent rights clause—retention by the subcontractor—which permits the offeror to retain title to subject inventions, except in subcontracts involving exceptional circumstances or intelligence activities. Therefore, domestic small business firms, educational institutions, and domestic nonprofit organizations normally need not request a waiver.

If an offeror's proposal includes a lower-tier subcontract to another organization, that lower-tier organization's business type will determine the applicable intellectual property provisions that will apply to the lower-tier subcontract. Note that a lower-tier subcontractor may apply for a patent waiver under the same conditions as the offeror.

Under a research, development, and demonstration project, the Department of Energy and NREL are unable to ascertain, prior to receipt of offers or performance of the project, their actual needs for technical data. It is believed that the requirements contained herein are the basic needs of the Department of Energy and NREL. However, if the offeror indicates in its proposal that proprietary data will be used or withheld under its proposed effort, the Department of Energy and NREL reserve the right to negotiate appropriate rights to the proprietary data. The appropriate rights may include "Limited Rights in Proprietary Data" and/or "Subcontractor Licensing."

d. Disclaimer

NEITHER THE UNITED STATES; NOR THE DEPARTMENT OF ENERGY; NOR MIDWEST RESEARCH INSTITUTE, NATIONAL RENEWABLE ENERGY LABORATORY DIVISION; NOR ANY OF THEIR CONTRACTORS, SUBCONTRACTORS, OR THEIR EMPLOYEES MAKE ANY WARRANTY, EXPRESS OR IMPLIED, OR ASSUME ANY LEGAL LIABILITY OR RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR USEFULNESS FOR ANY PURPOSE OF ANY OF THE TECHNICAL INFORMATION OR DATA ATTACHED OR OTHERWISE PROVIDED HEREIN AS REFERENCE MATERIAL.

e. Solicitation disputes

The General Accounting Office and the Department of Energy do not accept or rule on disputes for solicitations for Requests for Proposals issued by Management and Operating Contractors for the Department of Energy (operators of Department of Energy National Laboratories). Should an offeror have any concerns regarding the NREL solicitation process or selection determination, the offeror may contact Marty Noland, Advocate for Commercial Practices, at 303.384.7550. NREL will address each concern received from an offeror on an individual basis.

11. Solicitation provisions—incorporated by reference—general access

This solicitation incorporates one or more solicitation provisions by reference with the same force and effect as if they were given in full text. The following documents can be downloaded from the NREL **general access** website at <http://www.nrel.gov/contracts/rfps>. The “Related Documents” link provides access to the standard appendices and forms, or the NREL RFP Contact (see item 2) will make full text available upon request.

- P NREL Standard Terms and Conditions:
 - Appendix B-1, dated 07/24/00
- P NREL Intellectual Property Provisions:
 - Appendix C-1 or C-2, dated 10/22/98
- NREL Clauses for Subcontracts in Excess of \$500,000
 - Appendix D-1, dated 07/28/00
- Small Business (Lower-Tier) Subcontracting Plan, applicable to subcontracts in excess of \$500,000 (does not apply to Small Business Offerors)
 - Becomes Appendix F in final Subcontract Schedule
- P NREL Representations and Certifications for Subcontracts
- P NREL Cost Proposal Form and Instructions

12. Solicitation provisions – attached to RFP

This solicitation incorporates the following attachments:

- P Statement of Work (Attachment 1)
- P Sample Cost Sharing Subcontract Schedule (Attachment 2)

13. NAICS Code and Small Business Size Standard

The North American Industry Classification System (NAICS) code [formerly standard industrial classification (SIC)] for this solicitation and small business size standards for each are as follows:

541710	\$ 5.0 million in annual receipts*
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*Annual receipts of a concern means the annual average gross revenue for the last three fiscal years.